Application No. Unassigned   Preliminary Amendment

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A permanent-magnet~~-type~~ synchronous motor comprising:
a stator core having Z (Z is a natural number) slots, on which a coil is arranged~~,~~;
a rotor having permanent magnets~~-of~~ with 2×p (p is a natural number) poles and inserted into a torus of the stator core~~,~~; and
a pressurizing part that pressurizes an outer periphery of the stator core inward in N locations, ~~the~~ N being any one of ~~plus~~ positive values ~~among~~ of values calculated from N = p, N = ±2×p - Z×i1 (i1 is an integer ~~of~~ and at least 0), ~~or~~ and N = ~~Z×i1±2×p~~ Z(i1±2)p.

2. (Currently Amended) The permanent-magnet~~-type~~ synchronous motor according to claim 1, wherein ~~the~~ N is ~~a plus~~ the positive minimum value ~~among~~ of the values calculated from N = p, N = ±2×p - Z×i1 (i1 is an integer ~~of~~ and at least 0), ~~or~~ and N = ~~Z×i1±2×p~~ Z(i1±2)p.

3. (Currently Amended) The permanent-magnet~~-type~~ synchronous motor according to claim 1, wherein the pressurizing part comprises a frame that fixes the stator core and rotatably supports one end of the rotor.

4. (Currently Amended) A method of manufacturing a permanent-magnet~~-type~~ synchronous motor by fixing a stator core in a frame, ~~the method comprising~~ making a specific region of the frame and a specific region of the stator core, respectively, reference positions, and fixing ~~the~~ both of the specific regions together, after positioning ~~them~~ the specific regions in a specific positional relationship.

5. (Currently Amended) The method of manufacturing a permanent-magnet~~-type~~ synchronous motor[[,]] according to claim 4, wherein the specific region of the frame comprises regions~~,~~ in which an outer periphery of the stator core is pressurized inward ~~in~~ at N locations (N is an integer) with larger forces than those for other regions.

6. (Currently Amended) The method of manufacturing a permanent-magnet~~-type~~ synchronous motor[[,]] according to claim 5, ~~wherein~~ including providing a pressurizing member ~~such as a spacer, is provided~~ in the specific region of the frame for inward pressurization with larger forces than those for other regions.

7. (Currently Amended) The method of manufacturing a permanent-magnet ~~type~~ synchronous motor[[,]] according to claim 4, wherein ~~in the case where,~~ when the specific region of the frame and the specific region of the stator core, respectively, are made the reference positions, and fixed together after ~~the~~ both specific regions are positioned in the specific positional relationship, the specific region of the stator core ~~comes to~~ is located at one of a ~~teeth~~ tooth center, ~~or~~ and a slot center.

8. (Currently Amended) The method of manufacturing a permanent-magnet ~~type~~ synchronous motor[[,]] according to claim 4, wherein ~~in the case where,~~ when the specific region of the frame and the specific region of the stator core, respectively, are made the reference positions, and fixed together after ~~the~~ both specific regions are positioned in the specific positional relationship, the specific region of the stator core ~~comes to~~ is located at a joint ~~(seam)~~.

9. (Currently Amended) The method of manufacturing a permanent-magnet ~~type~~ synchronous motor[[,]] according to claim 4, wherein ~~in the case where,~~ when the specific region of the frame and the specific region of the stator core, respectively, are made the reference positions, and fixed together after ~~the~~ both specific regions are positioned in the specific positional relationship, the specific positional relationship positions ~~the number~~ N ~~of~~ locations of pressurization of the frame and the reference positions of the stator core and the frame ~~so as~~ to cancel cogging torque of the stator core, which is ~~beforehand~~ measured before mounting of the frame.

10. (Currently Amended) A method of manufacturing a permanent-magnet ~~type~~ synchronous motor, ~~the method~~ comprising ~~the step of~~:
    inserting and assembling a rotor having permanent magnets ~~of~~ with 2×p poles (P is a natural number) into a torus of ~~the~~ a stator core ~~formed to be~~ that has a torus[[-]]shape and ~~having~~ has Z (Z is a natural number) slots, on which a coil is arranged~~,~~;
    ~~the step of~~ rotating the rotor in a state~~,~~ in which electric current is not ~~caused to flow~~ flowing through the coil, to measure cogging torque for every angle~~,~~;
    ~~the step of~~ determining those locations~~,~~ in which an outer periphery of the stator core is pressurized, ~~on the basis of~~ based on measurements of the cogging torque~~,~~; and
    ~~the step of~~ assembling pressurizing parts, which pressurize the outer periphery of the stator core, ~~to an outside~~ outwardly of the stator core ~~in~~ at N locations, N being any ~~one~~ of ~~plus~~ positive values ~~among values~~ calculated from N = p, N = ±2×p - Z×i1 (i1 is an integer of at least 0), ~~or~~ and N = ~~Z×i1±2×p~~ Z(i1±2)p.

11. (Currently Amended) A method of manufacturing a permanent-magnet ~~type~~ synchronous motor by fixing a stator core in a frame, the method comprising positioning the frame and ~~the~~ a stator core in an arrangement, in which stress applied ~~on~~ to the stator core from the frame ~~assumes an extreme point~~ has a maximum in a predetermined region of the stator core ~~every type of the motor~~, to fix the stator core to the frame.

12. (Currently Amended) The method of manufacturing a permanent-magnet ~~type~~ synchronous motor[[,]] according to claim 11, wherein ~~a~~ the frame ~~having~~ has a substantially circular shape, including an elliptical shape ~~is adopted for the frame~~, and including positioning the stator core ~~is positioned~~ so that one of a ~~teeth~~ tooth center line ~~or~~ and a slot center line of the stator core is ~~made~~ consistent with one of a minor axis ~~or~~ and a major axis of the frame, and ~~fixed~~ fixing the stator core to the frame.

13. (Currently Amended) The method of manufacturing a permanent-magnet ~~type~~ synchronous motor[[,]] according to claim 11, ~~wherein~~ including positioning ~~between~~ the frame and the stator core ~~is made~~ so that ~~an arrangement, in which~~ stress applied ~~on~~ to the stator core from the frame becomes a maximum, ~~and~~ becomes consistent with one of a ~~teeth~~ tooth center line ~~or~~ and a slot center line of the stator core, and fixing the stator core ~~is fixed~~ to the frame.

14. (Currently Amended) The method of manufacturing a permanent-magnet ~~type~~ synchronous motor[[,]] according to claim 11, wherein the frame is a square frame ~~is used for the frame~~, and including positioning ~~is made~~ the frame so that one of a ~~teeth~~ tooth center line ~~or~~ and a slot center line of the stator core is ~~made~~ consistent with a diagonal line of the frame, and fixing the stator core ~~is fixed~~ to the frame.

15. (Currently Amended) The method of manufacturing a permanent-magnet ~~type~~ synchronous motor[[,]] according to claim 11, wherein positioning between the frame and the stator core is made every type of the motor so that an arrangement, in which stress applied on the stator core from the frame becomes minimum or maximum in a thickness distribution in a normal direction of the frame, and becomes minimum in rate of change of the thickness, becomes consistent with a teeth center line or a slot center line of the stator core, and the stator core is fixed to the frame.

16. (Currently Amended) The method of manufacturing a permanent-magnet~~-type~~ synchronous motor[[,]] according to claim 11, wherein when positioning is made every type of the motor so that an arrangement, in which stress applied on the stator core from the frame becomes minimum or maximum, becomes consistent with a teeth center line or a slot center line of the stator core, positioning between the frame and the stator core is made in an angular region in a range of positioning accuracy in view of manufacture, and the stator core is fixed to the frame.

17. (Currently Amended) The method of manufacturing a permanent-magnet~~-type~~ synchronous motor[[,]] according to claim 11, wherein an articulation type stator core, which needs butt portions or welds, or a thin-wall connection type stator core is adopted, positioning between the frame and the stator core is made so that an arrangement, in which a thickness distribution in a normal direction of the frame becomes minimum and the thickness becomes minimum in rate of change, becomes consistent with the butt portions or welds, and the stator core is fixed to the frame.

18. (Currently Amended) The method of manufacturing a permanent-magnet~~-type~~ synchronous motor[[,]] according to claim 16~~or 17~~, wherein a range of accuracy at the time of positioning is in an angular region of ±10 degrees.

19. (New) The method of manufacturing a permanent-magnet synchronous motor according to claim 17, wherein a range of accuracy at the time of positioning is in an angular region of ±10 degrees.